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(71) Applicant (for all designated States except US): **CUBE INVESTMENTS LIMITED** [CA/CA]; 420 Industrial Parkway South, Aurora, Ontario L4G 3V7 (CA).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CUNNINGHAM**,

James, Vern [CA/CA]; 62 Haskell Crescent, Aurora, Ontario M4P 1V2 (CA). **POUPORE, Timothy** [CA/CA]; 95 Broadway St., Toronto, Ontario M4P 1V2 (CA). **SYVERSON, Charles, D.** [US/US]; 2007 Roe Crest Drive North, Mankato, MN 56001 (US).

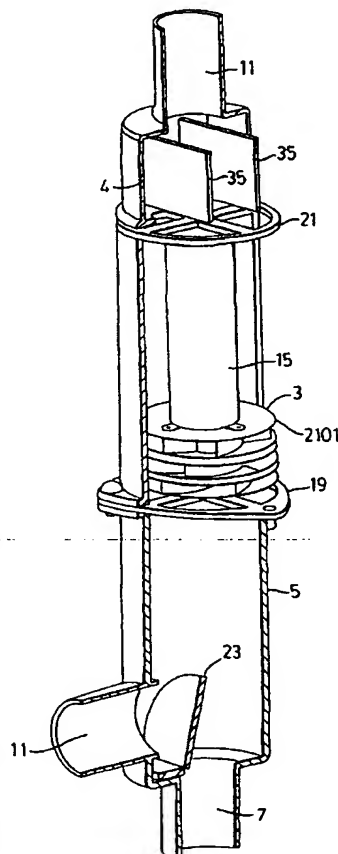
(74) Agent: **WILKES, Robert, H.**; 72 Albany Ave., Toronto, Ontario M5R 3C3 (CA).

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(54) Title: **SUCTION MOTOR FOR VACUUM CLEANER**



(57) Abstract: A cleaner (1) has a DC brushless motor (15) with stator (203) and rotor (212). Stator is mounted on a shaft and rotor is mounted inside and to a tubular body (207) about stator (203). Impeller (17) is mounted to and outside tubular body (207). The motor (15) and impeller (17) are mounted in a housing having an intake (7) and an exhaust (9). Operation of the motor and rotation of the impeller causes a partial vacuum at the intake (7) to draw air. The air is exhausted through the exhaust (9). A filter (61) prevents particles from entering the motor (15). Particles are collected in a receptacle (5) prior to the filter (61). The impeller (17) may be a squirrel cage fan, bladed fan, or centrifugal fan. A secondary exhaust (11) expels particles from the filter (61) and/or receptacle (5) by rotation of the impeller (17) in an opposite direction or by the use of a secondary DC motor and impeller. The housing (2) can fit in a cavity between conventional wall studs.

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